



June 01, 2016

Tom Moe USS Corporation P.O. Box 417 8771 Park Ridge Dr Mountain Iron, MN 55768

RE: Project: NPDES-LINE 3 Wkly Pace Project No.: 1266387

Dear Tom Moe:

Enclosed are the analytical results for sample(s) received by the laboratory on May 18, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Melisa M Woods

Massia Wirds

melisa.woods@pacelabs.com

Project Manager

Enclosures

cc: Cory Hertling Terri Sabetti, NTS





315 Chestnut Street Virginia, MN 55792 (218) 742-1042



CERTIFICATIONS

Project: NPDES-LINE 3 Wkly

Pace Project No.: 1266387

Virginia Minnesota Certification ID's

315 Chestnut Street, Virginia, MN 55792 Alaska Certification #MN01084 Arizona Department of Health Certification #AZ0785 Minnesota Dept of Health Certification #: 027-137-445

North Dakota Certification: # R-203

Wisconsin DNR Certification #: 998027470 WA Department of Ecology Lab ID# C1007 Nevada DNR #MN010842015-1

Oklahoma Department of Environmental Quality





SAMPLE SUMMARY

Project: NPDES-LINE 3 Wkly

Pace Project No.: 1266387

Lab ID	Sample ID	Matrix	Date Collected	Date Received
1266387001	WS-002 Scrubber Make-Up	Water	05/18/16 08:55	05/18/16 14:00
1266387002	WS-003 Thickener Overflow	Water	05/18/16 08:45	05/18/16 14:00

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SAMPLE ANALYTE COUNT

Project: NPDES-LINE 3 Wkly

Pace Project No.: 1266387

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
1266387001	WS-002 Scrubber Make-Up	EPA 200.7	MAR	3	PASI-V
		EPA 300.0	DMB	1	PASI-V
1266387002	WS-003 Thickener Overflow	EPA 200.7	MAR	3	PASI-V
		EPA 300.0	DMB	1	PASI-V



ANALYTICAL RESULTS

Project: NPDES-LINE 3 Wkly

Pace Project No.: 1266387

Date: 06/01/2016 04:52 PM

Sample: WS-002 Scrubber Make	e-Up Lab ID:	1266387001	Collecte	d: 05/18/16	08:55	Received: 05/	18/16 14:00 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP, Lab Filtered	Analytical	Method: EPA	200.7 Prepa	aration Meth	nod: EP	A 200.7			
Calcium, Dissolved	101	mg/L	5.0	0.29	10	05/24/16 14:08	05/25/16 08:53	7440-70-2	
Magnesium, Dissolved	195	mg/L	5.0	0.67	10	05/24/16 14:08	05/25/16 08:53	7439-95-4	
Total Hardness, Dissolved	1050	mg/L	100	50.0	10	05/24/16 14:08	05/25/16 08:53		
300.0 IC Anions 28 Days	Analytical	Method: EPA	300.0						
Sulfate	762	mg/L	20.0	10.0	10		05/24/16 17:22	14808-79-8	
Sample: WS-003 Thickener Overflow	Lab ID:	1266387002	Collected	d: 05/18/16	6 08:45	Received: 05/	18/16 14:00 Ma	atrix: Water	
Sample: WS-003 Thickener Overflow Parameters	Lab ID:	1266387002 Units	Collected Report Limit	d: 05/18/16 MDL	6 08:45 DF	Received: 05/		atrix: Water CAS No.	Qual
• Overflow Parameters	Results	Units	Report Limit	MDL	DF	Prepared	18/16 14:00 Ma Analyzed		Qual
Overflow Parameters	Results		Report Limit	MDL	DF	Prepared			Qual
Parameters 200.7 MET ICP, Lab Filtered	Results	Units	Report Limit	MDL	DF	Prepared		CAS No.	Qual
Overflow	Results Analytical	Units Method: EPA	Report Limit 200.7 Prepa	MDL aration Meth	DF nod: EP	Prepared A 200.7	Analyzed	CAS No.	Qual
Parameters 200.7 MET ICP, Lab Filtered Calcium, Dissolved Magnesium, Dissolved	Results Analytical	Units Method: EPA 2 mg/L	Report Limit	MDL aration Meth 0.29	DF nod: EP/	Prepared A 200.7 05/24/16 14:08	Analyzed 05/25/16 08:56	CAS No.	Qual
Parameters 200.7 MET ICP, Lab Filtered Calcium, Dissolved	Results Analytical 929 52.0 2530	Units Method: EPA : mg/L mg/L	Report Limit 200.7 Prepa 5.0 5.0 100	MDL aration Meth 0.29 0.67	DF nod: EP/ 10 10	Prepared A 200.7 05/24/16 14:08 05/24/16 14:08	Analyzed 05/25/16 08:56 05/25/16 08:56	CAS No.	Qual

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QUALITY CONTROL DATA

Project: NPDES-LINE 3 Wkly

Pace Project No.:

1266387

QC Batch: QC Batch Method: MPRP/6974

EPA 200.7

Analysis Method:

EPA 200.7

Analysis Description:

Matrix: Water

200.7 MET Dissolved

MDL

Associated Lab Samples:

1266387001, 1266387002

METHOD BLANK: Associated Lab Samples:

321198

1266387001, 1266387002

Blank

Reporting Limit

Parameter

Units mg/L Result ND

0.50 0.50

0.029

Analyzed 05/25/16 08:34 Qualifiers

Calcium, Dissolved Magnesium, Dissolved

Calcium, Dissolved

Calcium, Dissolved

Magnesium, Dissolved

Date: 06/01/2016 04:52 PM

Magnesium, Dissolved

Parameter

mg/L

Units

mg/L

mg/L

Result

ND

LCS

0.067

05/25/16 08:34

LABORATORY CONTROL SAMPLE: Parameter

321199

Units

mg/L

mg/L

Spike Conc. 50

Result 53.8 53.5

LCS

% Rec Limits 108 107

% Rec

Qualifiers 85-115

102

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:

321200

14.0

321201

50

MS

Result

65.7

MSD MS 1266503001 Spike Spike Conc. Conc. 38.7 50 50

50

50

MSD MS Result % Rec 89.8 89.8

65.1

MSD % Rec 102 102

103

85-115

Limits **RPD** RPD 70-130 0 70-130

% Rec

20 20

Max

Qual

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL DATA

Project: NPDES-LINE 3 Wkly

Pace Project No.: 1266387

Date: 06/01/2016 04:52 PM

QC Batch: WETA/16951 Analysis Method: EPA 300.0

QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions

Associated Lab Samples: 1266387001, 1266387002

METHOD BLANK: 321267 Matrix: Water

Associated Lab Samples: 1266387001, 1266387002

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Sulfate mg/L ND 2.0 1.0 05/24/16 15:10

LABORATORY CONTROL SAMPLE: 321268

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Sulfate mg/L 50 48.1 96 90-110

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 321269 321270

MS MSD 1266636001 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual Sulfate 0 20 mg/L 57.8 100 100 164 164 107 106 90-110

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 321271 321272

MS MSD 1266662001 MS MSD MS Spike Spike MSD % Rec Max Limits RPD Parameter Units Result Conc. Conc. Result Result % Rec % Rec RPD Qual Sulfate 318 250 250 592 592 110 110 90-110 0 20 mg/L

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALIFIERS

Project: NPDES-LINE 3 Wkly

Pace Project No.: 1266387

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

Date: 06/01/2016 04:52 PM

PASI-V Pace Analytical Services - Virginia





QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NPDES-LINE 3 Wkly

Pace Project No.: 1266387

Date: 06/01/2016 04:52 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
1266387001 1266387002	WS-002 Scrubber Make-Up WS-003 Thickener Overflow	EPA 200.7 EPA 200.7	MPRP/6974 MPRP/6974	EPA 200.7 EPA 200.7	ICP/5214 ICP/5214
1266387001 1266387002	WS-002 Scrubber Make-Up WS-003 Thickener Overflow	EPA 300.0 EPA 300.0	WETA/16951 WETA/16951		

Company: Address: 8 Mt. Iron, MN 55768 Required Client Information: ITEM# 9 equested Due Date WS-003 Thickner Overflow WS-002 Scrubber Make-Up USS Corporation P.O. Box 417 One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique **SAMPLE ID** ADD/TIONAL COMMENTS Fax MATRIX
Drinking Water
Water
Waste Water
Waste Water
Product
Soil/Soild
Oil
Wipe
Air
Other Report To: Capy To: Required Project Information: Project Name: Purchase Order #: Section B Project #: ODE ODE ODE RELINQUISHED BY (AFFILIATION Тат Мое MATRIX CODE (see valid codes to left) ٤ ٤ (andrease SAMPLE TYPE (G=GRAB C=COMP) NPDES-LINE 3 Wkly 54:30 0x 31 554; 30 92.32 55:30 JUN 5 155,30 Pr. 18.5 START SAMPLER NAME AND SIGNATURE TIME COLLECTED SIGNATURE of SAMPLER: PRINT Name of SAMPLER: DATE The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately CHAIN-OF-CUSTODY / Analytical Request Document 5-18-14:00 DATE SAMPLE TEMP AT COLLECTION Pace Quote: Pace Project Manag Attention: TIME # OF CONTAINERS Address: Company Name: Invoice Information Section C Pace Profile #: aul martila Unpreserved Count matter H2SO4 ниоз Preservatives HCI NaOH WO#:1266387 PM: MMH ACCEPTED BY JAFFILIATION CLIENT: USS CORP Na2S2O3 Methanol Other Y/N Analyses Test LAB FILTERED: \$04 DATE Signed: Lab FILTERED: Ca,Mg,Haro Due Date: 06/02/16 5-18-16 5-18-1 DATE TIME 1400 رې نو TEMP in C State / Location Residual Chlorine (Y/N) SAMPLE CONDITIONS ... Received on LF,LF ᄕᄕ < (Y/N) Custody 7 Sealed ð Cooler (Y/N) Samples Intact (Y/N)

Pace Analytical*

Document Name:

Sample Condition Upon Receipt Form

Document No.:

Document Revised: 23Feb2015

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Issuing Authority:

F-VM-C-001-Rev.09 Pace Virginia, Minnesota Quality Office

Sample Condition Client Name: Upon Receipt ,	. /		Project #	. W0#:1266387
	199			ncolour de la li rencial de 1844
Courier: Fed Ex UPS	□USPS	Z	lient	1266387
☐Commercial ☐Pace Tracking Number:	Other:			
THE CKING MUNICET.				
Custody Seal on Cooler/Box Present?	ZNo	Seals I	ntact?	Yes Optional: Proj. Due Date: Proj. Name:
Packing Material: Bubble Wrap Bubl	ble Bags N	one [Other:	Temp Blank? ✓ Yes ☐ No
Thermometer Used: 🗂 140792808	/ Type of	ce:	ົ Wet Γ	Blue None Samples on ice, cooling process has begur
Cooler Temp Read °C: Cooler Te	emp Corrected *	/	٦ ً	
Correction from the property of the contraction of		<u> </u>	Date and	Biological Tissue Frozen? $ Yes No N $ I Initials of Person Examining Contents: $ S /R C $
				Comments:
Chain of Custody Present?	☐ (es	□No	□N/A	1.
Chain of Custody Filled Out?	✓Yes	□No	□N/A	2.
Chain of Custody Relinquished?	Z)Yes	□No	□N/A	3.
Sampler Name and Signature on COC?	✓Yes	□No	□N/A	4.
Samples Arrived within Hold Time?	ʹYes	□No	□n/a	5.
Short Hold Time Analysis (<72 hr)?	□Yes	⊠No	□n/a	б.
Rush Turn Around Time Requested?	∐Yes	Ž)No	□n/a	7.
Sufficient Volume?	□Yes	□No	□n/a	8.
Correct Containers Used?	✓Yes	□No	□N/A	9.
-Pace Containers Used?	√ □Yes	□No	□n/a	
Containers Intact?	Z Yes	No	□n/a	10.
Filtered Volume Received for Dissolved Tests?	□Yes	□No	ØN/A	11. Note if sediment is visible in the dissolved containers.
Sample Labels Match COC?	Yes	□No	□N/A	12.
-Includes Date/Time/ID/Analysis Matrix:	WT			•
All containers needing acid/base preservation will checked and documented in the pH logbook.	be Yes	□No	ZÍN/A	See pH log for results and additional preservation documentation
Headspace in Methyl Mercury Container	∐Yes	□No	ZN/A	13.
Headspace in VOA Vials (>6mm)?	Yes	□No	[ZN/A	14.
Trip Blank Present?	∐Yes	□No	ØN/A	15.
Trip Blank Custody Seals Present?	Yes	□No	, ∏ N/A	·
Pace Trip Blank Lot # (if purchased):				
CLIENT NOTIFICATION/RESOLUTION				Field Data Required? Yes No
Person Contacted:				Date/Time:
Comments/Resolution:				

Project Manager Review:

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)